the plain for a considerable distance. When winged they make for the nearest burrow, and when once within it, it is impossible to dislodge them." It is commonly said that rattlesnakes are likewise abundant in these "Prairie-dog villages," and that the beast, bird, and reptile, may not unfrequently be seen here in harmonious juxtaposition. In the pampas of South America, this little owl associates with another Burrowing rodent, which lives in communities in a similar manner to the Prairie-dog. This is the Vizcacha (*Lagostomus trichodactylus*). During the open day, Mr. Darwin tells us, but more especially in the evening, these owls may be seen in the pampas of the Argentine Republic in every direction, standing by pairs on the hillock next to their hole. If disturbed, they either retreat under-ground, or move with an undulatory flight to a short distance, and then turning round, steadily gaze at their pursuer.

The Burrowing Owl is, however, perfectly capable of making its own burrow, as Mr. Darwin tells us it always does where the Vizcacha is not found, and as it has done in the Zoological Society's Gardens. The first individual of this species which was received in 1868 from the same donor, was no sooner placed in a cage with a sandy floor than, "true to its habits, it excavated a hole in the soil at the bottom, into which it always retreated when threatened." The same habit may be witnessed on alarming the specimens of this bird now in the Society's gardens, although the burrow in the present instance has been, at all events partially, made artificially for their use.

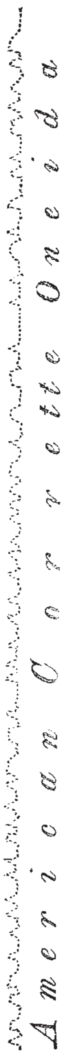
(4.) An example of a rather rare Antelope from Western Africa—the Woodloving Antelope (*Cephalophus sylvicultrix*)—received in exchange March 24th. This is a representative of a group of Antelopes of small size which are found only in tropical or subtropical Africa, and are peculiar for having a little tuft of hair between their horns, as their generic name imports. Some eighteen or twenty species of this genus are known to science, and several of them are usually represented in the Zoological Society's collection. But the present animal, which is well marked by its white dorsal streak, has not been previously received alive by the Society.

P. L. SCLATER

NOVEL TELEGRAPHY—ELECTRIFICATION OF AN ISLAND

A CURIOUS discovery has been made by Mr. Gott, the superintendent of the French company's telegraph station at the little island of St. Pierre Miquelon. There are two telegraph stations on the island. One, worked in connection with the Anglo-American company's lines by an American company, receives messages from Newfoundland and sends them on to Sydney, using for the latter purpose a powerful battery and the ordinary Morse signals.

The second station is worked by the French Transatlantic Company, and is furnished with exceedingly delicate receiving instruments, the invention of Sir William Thomson, and used to receive messages from Brest and Duxbury. These very sensitive instruments were found to be seriously affected by earth-currents; *i.e.*, currents depending on some rapid changes in the electrical condition of the island; these numerous changes caused currents to flow in and out of the French company's cables, interfering very much with the currents indicating true signals. This phenomenon is not an uncommon one, and the inconvenience was removed by laying an insulated wire about three miles long back from the station to the sea, in which a large metal plate was immersed; this plate is used in practice as the earth of the St. Pierre station, the changes in the electrical condition or potential of the sea being small and slow, in comparison with those of the dry rocky soil of St. Pierre. After this had been done, it was found that part of the so-called earth-currents had been due to the signals sent by the American company into their own lines, for when the delicate receiving instrument was placed between the earth at the French station and the earth at the sea, so as to be in circuit with the three miles of insulated wire, the messages sent by the rival company were clearly indicated, so clearly indeed, that they have been automatically recorded by Sir William Thomson's syphon recorder. Annexed is a facsimile of a small part of the message concerning the loss of the steamship Oneida, stolen in this manner.



It must be clearly understood that the American lines come nowhere into contact, or even into the neighbourhood of the French line. The two stations are several hundred yards apart, and yet messages sent at one station are distinctly read at the other station; the only connection between the two being through the earth; and it is quite clear that they would be so received and read at fifty stations in the neighbourhood all at once. The explanation is obvious enough: the potential of the ground in the neighbourhood of the stations is alternately raised and lowered by the powerful battery used to send the American signals. The potential of the sea at the other end of the short insulated line remains almost if not wholly unaffected by these, and thus the island acts like a sort of great Leyden jar, continually charged by the American battery, and discharged in part through the short insulated French line. Each time the American operator depresses his sending key, he not only sends a current through his lines, but electrifies the whole island, and this electrification is detected and recorded by the rival company's instruments.

No similar experiment could be made in the neighbourhood of a station from which many simultaneous signals were being sent; but it is perfectly clear that unless special precautions are taken at isolated stations, an inquisitive neighbour owning a short insulated wire might steal all messages without making any connection between his instrument and the cable or land line. Stealing messages by attaching an instrument to the line was a familiar incident in the American War; but now messages may be stolen with perfect secrecy by persons who nowhere come within a quarter of a mile of the line. Luckily, the remedy is simple enough.

All owners of important isolated stations should use earth-plates at sea, and at sea only. This plan was devised by Mr. C. Varley many years ago to eliminate what we may term natural earth-currents, and now it should be used to avoid the production of artificial earth-currents which may be improperly made use of.

FLEEMING JENKIN

NOTES

WE regret to hear that Baron Liebig is very ill.

WE are informed that Messrs. Lyon Playfair, C.B., M.P., B. Samuelson, M.P., and Dr. W. A. Miller, will probably be among the members of the Royal Commission to inquire into the Present State of Science in this country.

PRINCIPAL DAWSON, of Montreal, who is now on a visit to this country, will deliver the Bakerian Lecture to-night before the Royal Society. The subject is the Pre-carboniferous Flora of North Eastern America. The opportunity of listening to so eminent a geologist on a subject which he has made especially his own, will doubtless draw together a large assembly of our men of science anxious to do honour to their distinguished *confrère*.

THE following gentlemen have been appointed by the University of London examiners and assistant examiners for 1870-

1871 in the various branches of science:—Logic and Moral Philosophy: Rev. Mark Pattison, B.D., and Prof. G. Croom Robertson, M.A. Political Economy: Prof. W. Stanley Jevons, M.A., and Prof. T. E. Cliffe Leslie, LL.B. Mathematics and Natural Philosophy: Prof. H. J. S. Smith, M.A., F.R.S., and Prof. Sylvester, M.A., F.R.S. Experimental Philosophy: Prof. W. G. Adams, M.A., and Prof. G. Carey Foster, B.A., F.R.S. Chemistry: Dr. Matthiessen, F.R.S., and Prof. Odling, M.B., F.R.S. Botany and Vegetable Physiology: Joseph Dalton Hooker, M.D., LL.D., F.R.S., and Thomas Thomson, M.D., F.R.S. Geology and Palæontology: Prof. Duncan, M.B., F.R.S., and Prof. Morris, F.G.S. Practice of Medicine: John Syer Bristowe, M.D., and Prof. J. Russell Reynolds, M.D., F.R.S. Surgery: Prof. John Birkett, F.R.C.S., and F. Le Gros Clark, F.R.C.S. Anatomy: Prof. William Turner, M.B., F.R.S.E., and Prof. John Wood, F.R.C.S. Physiology, Comparative Anatomy, and Zoology: Michael Foster, M.D., B.A., and Henry Power, M.B. Obstetric Medicine: Robert Barnes, M.D., and Prof. W. H. Graily Hewitt, M.D. Materia Medica and Pharmaceutical Chemistry: Thomas R. Fraser, M.D., F.R.S.E., and Prof. Alfred Baring Garrod, M.D., F.R.S. Forensic Medicine: E. Headlam Greenhow, M.D., and Thomas Stevenson, M.D.

Professor Agassiz is still seriously ill.

We are rejoiced to hear that M. Janssen is to be provided with instruments wherewith to continue his observations on the sun by means of the new method. This was announced at the last meeting of the Paris Academy by M. Faye, who remarked: "El quelques mois il livrera a la Science cent fois plus de données precieuses que les astronomes n' auraient pu en recueillir, avant lui, par l'observation ordinaire des eclipses totales d'une vingtaine de siecles."

The number of entries for the Examination for Women at the London University, which takes place during the current week, is 17, against 9 last year. Of these, 12 will be examined in London, and 5 at Cheltenham.

Dr. A. Voelcker and Mr. H. M. Jenkins, Secretary to the Royal Agricultural Society, reprint, from the Journal of the Society, a Report on the Agriculture of Belgium, containing much valuable information on its soil and climate, geological features, modes of agriculture, and rural economy.

"The Body and its Health, a Book for Primary Schools," by E. D. Mapother, M.D., is a little elementary book on human physiology, prepared with greater care and attention to accuracy han is usually the case with primary scientific hand-books. It contains in a small space, and published at a low price, a mass of such information as ought to form a portion of the curriculum of all schools, both for boys and girls, and is illustrated by good woodcuts.

The "Repertorium für Meteorologie," issued by the Imperial Academy of St. Petersburg, in the form of a 4to. volume, edited by Dr. H. Wild, Director of the Physical Central Observatory, contains a mass of tables respecting the meteorological phenomena of Russia, and a variety of other information.

We have on our table the reports of several provincial scientific societies, and other papers of a like nature:—The Proceedings of the Berwickshire Naturalists' Club, for 1869; Transactions of the Norfolk and Norwich Naturalists' Society for 1869-70; the 37th Annual Report of the Royal Cornwall Polytechnic Society for 1869; and the Geology, Botany, and Zoology of the Neighbourhood of Alnwick, by George Tate, F.G.S. They all show the zeal with which the pursuit of natural history is followed in the provinces; these local societies have been the nursery of many a genuine naturalist who has rendered important service to the study of Nature.

Among the objects of interest exhibited at the soiree of the Linnean Society on the 27th ult., was a collection of plants made by Mr. W. W. Saunders, arranged in pairs, the plants forming each pair belonged to entirely different natural orders, but were so remarkably alike in the general form, and even in the marking of the foliage, as to be barely distinguishable even to a practised eye. One of the most strikingly "mimetic" pairs were a Conifer and a Selaginella, belonging to the two sub-kingdoms of flowering and flowerless plants.

According to Mr. Kurtz, the Curator of the Herbarium of the Calcutta Botanical Gardens, the Andaman Islands are gradually sinking, the rate of subsidence being about one foot in a century. This inference is founded on the fact that trunks of trees still rooted in the ground may be seen in the water of the straits which separate the islands, belonging to species which never grow in mangrove swamps, but which are only found further inland. It is even possible to "trace in several places the stumps of the sunken trees in the sea, up to the state when the trees are just dying by the influence of the sea-water, and the subsequent change of the soil by the formation of the mangrove swamp." At the rate of subsidence indicated by Mr. Kurtz, a thousand years must elapse before the extensive convict establishment maintained on these islands will be in immediate danger of submersion.

In a forthcoming number of his "Geographische Mittheilungen," by means of a map and a memoir, the geographer Petermann gives his rendering of the information contained in Dr. Livingstone's recent letters, taken in connection with the former travels of the Portuguese in Central South Africa. The new real geography of this map agrees remarkably well, in its general features, with a chart which lately appeared in this journal. There is, however, one main point of difference. A river named *Luvivi* was crossed by Pombeiro Baptista in his route to the Cazembe's town from that of the Muata Yanvo, and is distinctly stated by him to run into the Luapula, the river which is now known to unite Lakes Bangeweolo and Moero. Livingstone says that a large river named *Lufira* drains the western side of the great valley, and takes up the waters of Ulenge in the west of Tanganyika. On the foundation of the resemblance of these names—surely a very weak one in a region where duplicate river names are frequent—Dr. Petermann discards the Pombeiros statement, and uniting the Luviri with the Lufira, carries a great river through the midst of the country separating the valleys ruled over by the Muata Yanvo and the Cazembe, which all travellers here agree is a mountainous desert, and which the road joining these territories bends far southward to avoid. Again: The country of Usango is said by Livingstone to be on the east of the plateau which rises south of Tanganyika; on this map it is indicated to westward of that lake; and Lake Liemba, instead of being shown on the northern slope of that upland, is represented as lying in a valley directly continuing that of Tanganyika. The uncertainty as to the identity of the Chowambe Lake with the Albert Nyanza, and consequently of the union of Tanganyika with the Nile system, is considered too great to admit of any solution of the Nile problem as yet, and any attempt at this is characterised as plucking unripe fruit. This part also contains a very interesting account of a voyage by a Norwegian fisher named Captain E. H. Johannesen, who, in the summer of 1869, sailed completely round the island of Novaia Zemlia and through the Kara Sea. This gulf, believed till now to be constantly choked up by impenetrable ice-park, has been called the "ice-cellar" of the North Pole. In place of this, Johannesen found a mild atmosphere off the north-east of Novaia Zemlia, and throughout the whole Kara Gulf in July and August no ice was visible, but a heavy roll of the open sea came up from the south-east.

Mr. B. Williamson, one of the Fellows of Trinity College, Dublin, is preparing a "Treatise on Mechanics," which will shortly be issued by the University Press.

Mr. James Glaisher has given two lectures for the "Sunday Lecture Society" on the evenings of April 24th and May 1st., on "The Balloon" and on "Rain." In the latter he gave an interesting account of how rain is derived and how measured ; some most carefully prepared tables were exhibited, together with diagrams and some excellent photographs of the varied forms of snow crystals. The lecture for May 8th will be by Mr. Henry Moody on "The Prevention of Infectious Diseases." The importance of this subject, in reference to the great object of the society, the social welfare of mankind, will be illustrated by the example of Bristol. From being one of the most unhealthy, Bristol has become one of the most healthy of cities. In the summer and autumn of 1832 the ravages there by cholera were enormous ; the deaths alone approaching to 1000 ! In 1866, on the contrary, when the poor at the East-end of London were dying by hundreds, the deaths in Bristol were but 26 ; and it will be pointed out that this vast difference has arisen from the precautions and general sanatory measures adopted by the inhabitants and authorities of the City of Bristol.

M. Quenault reports the discovery at Hauteville-sur-mer, near to a rock called Maulieu, of a bed of vegetable mould in which repose trunks of trees, still holding by their roots, along with a layer of turf. At high tide this bed is covered to the depth of about twelve inches. The oak alone has preserved its hardness, the other woods having become quite soft, but still preserving their colour and even their bark. He supposes the immersion to have taken place in the eighth century.

The ninth reunion of the learned societies of the Sorbonne took place on the 20th of April, when M. Le Verrier was appointed president, M. Milne-Edwards vice-president, and M. Blanchard, secretary of the Section of Sciences ; M. le Marquis de la Grange, president, M. Léon Renier, vice-president, and M. Chabouillet, secretary of the Section of Archæology ; M. Amédée Thierry, president, and M. Hippeau, secretary of the Section of History. M. Le Verrier stated that the lectures instituted at the Sorbonne, which have already been in existence ten years, have had already the most beneficial results ; they have formed bonds between the *savants* of France and of the other countries of Europe, and have contributed to raise scientific and literary labours to a higher and higher platform.

We have received Washington papers of the 13th, 14th, and 15th of April, containing a report of the 13th semi-annual session of the National Academy of Sciences, held in that city. The most important papers read were: "On the coming transits of Venus," by Prof. Simon Newcomb; "On meridional arcs, measured in connection with the United States coast survey," by Mr. J. E. Hilgard; "Craniological observations," by Dr. George Otis; "The Northmen in Greenland," by Dr. Hayes; "Considerations of the apparent inequalities of long periods in the moon's mean motion," by Prof. S. Newcomb; "On the influence of the interior structure of the earth on precession and nutation," by Prof. J. G. Barnard; "On a new classification of clouds," by Prof. Poey, of Havana; "On fluctuations of the barometer," by Dr. B. F. Craig. Prof. Joseph Henry occupied the chair. We purpose giving abstracts of some of these pages on a future occasion.

A Natural History Society has recently been established at Winchester College; and a Botanical Section has been formed in connection with the Hants and Winchester Scientific and Literary Society.

Mr. Llewellynn Jewitt has issued a prospectus of a proposed publication, by subscription, of an entirely new, large, and comprehensive history, topography, and genealogy of the county of Derby.

A paper appears in the last number of the "Proceedings of the Royal Society," by Dr. Herbert Davies, on the law which regulates the relative magnitude of the areas of the four orifices of the heart. He remarks that although to ordinary observation these orifices appear to exhibit no mutual relationship of size, there can be no doubt that an instrument so accurate in the adaptation of its valvular apparatus, and so exact in the working of its different parts, must reveal on close examination the existence of laws which not only determine the force required to be impressed upon the blood traversing its chambers, but also the relative sizes of these apertures to one another. On converting Dr. Peacock's measurements of the circumference of the several orifices into numbers representing these areas it is found that in the male the respective mean areas are

Tricuspid	1¾ sq. inch.
Pulmonic	1 ,,
Mitral	1¼ ,,
Aortic	¾

and on pushing the inquiry further, it is found that there is a distinct law presiding over them which is discovered on comparing the ratios of the areas of corresponding orifices. Thus—

$$\frac{\text{Area of tricuspid}}{\text{Area of mitral}} = \frac{1.78}{1.27} = 1{\cdot}4 \text{ nearly}$$

$$\frac{\text{Area of pulmonic}}{\text{Area of aortic}} = \frac{1}{78} = 1{\cdot}3 \text{ nearly}$$

or in other words, the area of the tricuspid appears from these calculations to bear nearly the same relation to the area of the mitral, which the area of the pulmonic does to that of the aortic orifice ; *i.e.*, were the tricuspid, for example, twice the size of the mitral orifice in area, the pulmonic would be twice the size of the aortic orifice in area, the two ratios differing from each other only by one-tenth. The same law probably holds in the hearts of most animals, the areas of the four orifices bearing an exact mathematical relationship to each other, so that if the areas of any three of the openings be known, the area of the fourth orifice can be correctly calculated. A knowledge of this law, it is obvious, may prove of great importance in estimating the amount of contraction or dilatation of orifice which may be present in disease. Dr. Davis then proceeds to give the reasons for this arrangement, for which we must refer our readers to the original.

That the white corpuscles of the blood can pass through the walls of the blood-vessels is now admitted by so many observers, that it may fairly be regarded as an established fact. But the entrance of a solid body from the outside of the capillaries into their interior has, so far as we know, only been observed in one or two exceptional instances. Quite recently, however, M. Saviotti has published a paper in the *Centralblatt*, in which he describes the passage of entire pigment cells from the parenchyma of the web of the foot of the frog through the walls of the capillaries and smaller veins, into their lumen, where having arrived, they are swept away by the blood current as a phenomenon of common occurrence, and easily followed. To render this evident he excites local inflammation in the web by the application of a dilute (2 per cent.) solution of sulphuric acid. After the lapse of some time the pigment cells of the part affected are found to have congregated together round the minute vessels in a somewhat contracted condition, their long branching process becoming materially shortened. The contractility which these cells are known to possess, however, is not entirely abrogated. One or more of the processes may be seen to insinuate itself through the wall of the adjacent capillary. After penetration it may become much elongated, and be even altogether carried away by the current of blood, to the movements of which for a time it offers an impediment ; or it may, so to speak, drag after it the rest of the cell, which after remaining a little while adherent to the inner surface of the vessel at the point where it has entered, is swept, or itself swims away. Is not this a singular fact? Of what nature must the capillary wall be, that will thus admit the ingress and egress of solid bodies, and yet retain the red blood corpuscles even under great increase of pressure.

M. E. Lefevre is engaged upon a monograph of the species of the genus *Clythra*, inhabiting Europe and its confines (including the Mediterranean region). As many new species have been discovered, especially in Algeria and the East, since the publication of Lacordaire's memoir in 1848, M. Lefèvre will be thankful for the loan of specimens of new or rare species, and for any information as to their geographical distribution. M. Lefèvre's address is 28, Rue Constantine, Paris-Plaisance.

We quote the following from the *Scotsman*, of May 2 :— "A correspondent writes : 'In Inverleith Row on Saturday night, exactly at a quarter-past eleven o'clock, my attention was attracted by a sudden and strange brightness overspreading everything around. Instinctively turning my eyes upwards, a grand sight met my gaze. A meteor of remarkable size, brilliancy, and distinctness, was seen shooting from the heavens, from about the zenith, and descending earthwards in a southerly direction. The form of this interesting object seemed elliptical, and it was of a bright yellow hue. It had a clearly-defined apex or point, which was of a deep red colour, and appeared to glow and sparkle in a wonderful manner. The phenomenon was visible for about two seconds, and lighted up everything around me. The night was fine and clear, with a decidedly frosty air, and there was a light, steady breeze blowing from the north-west at the time." On the same subject our Dunbar correspondent writes : 'A very brilliant meteor was observed here about eleven o'clock on Saturday night. When first seen, the meteor had the appearance of a star of the first magnitude. As it approached, however, it gradually increased in size until it assumed the appearance of a ball of five or six inches in diameter, and changing its colour from a pale silvery white to a bright blue flame. As it still increased, sparks seemed to be emitted from the circumference, giving it the appearance of being surrounded with a peculiar halo of dense silvery rays. It continued in this state for a second or two, and then shot across the heavens in a southerly direction, the ball increasing in brilliancy as it travelled, and leaving behind it a long train of lurid-coloured flame. From the time it was first seen approaching until it vanished about five or six seconds elapsed. The night was clear and cold at the time.' "

THE GRESHAM LECTURES

THE Lectures (three in number) were delivered by Dr. Symes Thompson, during the past week, at the Gresham College, Basinghall-street. The first was occupied with the consideration of Cough, an account being given of its etiology varieties, and general principles of treatment. The second was devoted to Tonics; whilst of the third, which treated of Climate and Health Resorts, we give an epitome as likely to prove interesting to some of our readers. Dr. Thompson remarked that the Romans very early discovered the use of mineral waters, as shown by many of their relics being found in the neighbourhood of such springs ; whilst at Wiesbaden, tablets have been found with votive inscriptions. Some of the more common ingredients of mineral waters were then described, and their chemical properties demonstrated, including carbonic acid, iron, sulphuretted hydrogen, &c. The properties of ozone were then discussed in connection with pure air, and the lecturer passed on to the consideration of climate and health resorts, and said that it was a great mistake to suppose that any particular place was the best for a particular malady, for there is no specific action in the air of any place; and the physician, in recommending a resort to patients, had regard to the kind of climate there found, a dry climate being suitable for most bronchial membranes, and a moist climate for the reverse state of the membranes, and an approximation to such different climates can be obtained in our rooms. If the patient be feverish and excitable, he should be sent to an exciting varied climate ; or, if languid and torpid, not to a quiet, mild, uniform climate. These two kinds of climate are obtainable at the south of France ; for at Nice the climate is bright and exciting, while in the neighbourhood of the Pyrenees, at Pau, the atmosphere is very still, and eminently suitable to patients suffering from irritable membranes. The great advantage gained by persons going abroad is no doubt the regular daily outdoor exercise, not obtainable in the varied winter of our island, but found in Algiers, Riviera, Mentone, Nice, &c., at that season. Together with exercise may be linked the advantage derived from breathing pure air. There are, however, many places in England where almost the same benefit may be enjoyed. It was the former practice in cases of lung-disease, to shut up patients in close rooms, with fire burning, all through the winter, the consequence being that they became like hothouse plants, and on the first exposure to the open air in spring all these advantages were lost. Acting on the same principle, consumptive patients up to 20 years ago were sent to Madeira. Three years ago the inhabitants of Madeira, wishing to re-establish the value of their climate in lung-disease, solicited the authorities of the Brompton Hospital for Consumption to send them out patients as a matter of experiment. Twenty patients were sent out, and only those who were likely to be benefited by the climate of Madeira, being all in an advanced stage of lung-disease. Of this number 1 patient died suddenly, although up to the time of his death he seemed to be benefiting by the change ; 4 were worse ; 6 were stationary, and 7 were markedly benefited ; 2 very much benefited. This has been regarded by some as unsuccessful ; but Dr. Thompson was of different opinion, and thought it indicated that Madeira is a useful climate in certain cases. Since Madeira has been abandoned there has been a revulsion of feeling in favour of Canada as a resort for consumptives, but that this is no new doctrine is seen from the fact that the value of cold climates for consumption was advocated by Baron Larrey, Napoleon Bonaparte's physician. There are disadvantages as well as advantages in the most favoured health resorts; such as the dry, hot "mistral' of Nice, or the dry, dusty "brickfielder" of Melbourne,—winds which patients dislike as much as our east wind. Purity of air or absence of dust is of very great importance ; and for this reason it is now the practice to send patients suffering from chest-disease for a long sea-voyage. It constantly happens that sick people—in whom the disease is far advanced—press their medical men to send them on a sea-voyage ; but in their case the remedy has come too late, and so it happens that the death-rate at Melbourne is exceedingly high—more than half the deaths being due to consumption. Dampness favours consumption ; so that dry air is another desideratum which can be obtained at certain altitudes —so that in certain districts it is found possible to resort to mountain-tops, where consumption does not occur. In the neighbourhood of the equator the so-called "immunity-level" is at a height of 9,000 feet ; at Algiers, 6,000 feet ; at London, 3,000 feet. The chief resorts in Europe are the Swiss mountains, where English people often go to spend the winter, in perpetual snow, but yet in an atmosphere so pure and clear that the most delicate invalids can go out in the open air. In Norway, Russia, &c., the immunity-level is only 1,000 feet above the sea.

SCIENTIFIC SERIALS

THE May number of the *Journal of Botany, British and Foreign*, commences with the first part of a *Clavis Agaricinorum* by the well-known fungologist, Mr. Worthington Smith. The general classification of the Agarics adopted by Fries and Berkeley is followed ; but several new sub-genera are proposed. An ingenious tabular view accompanies the paper, presenting the salient features of the series and sub-genera of this vast genus at a glance. Dr. Seemann continues his revision of the natural order *Bignoniaceæ ;* while the Hon. J. L. Warren contributes a paper on a sub-division of *Rubus*, a most intricate genus, to which he has paid special attention ; and Dr. H. Trimen a description of a new British *Callitriche*. Other short notes and notices fill up the number, which maintains the interest for British botanists especially, promised on the commencement of the new series.

The *Revue des Cours Scientifiques* for April 23rd contains a report of an interesting address delivered before the University of Berlin, by M. du Bois Reymond on the Organisation of Universities ; the conclusion of Fotherly's address to the Hunterian Society, and report of a lecture by M. Claude Bernard, on Suffocation by Charcoal. The number for April 30th is entirely occupied by M. Bouley's lecture at the Sorbonne, on Madness, and the conclusion of M. Bernard's lecture.